SAT PROGRAM HOMEWORK ASSIGNMENTS

YOUR HOMEWORK FOR EACH CHAPTER INCLUDES:

- three sets of practice problems
- essay exercises (if you are taking the optional essay section)

DIRECTIONS FOR COMPLETING HOMEWORK:

**STEP 1**
You will find Part 1 and the essay exercises on the following pages. **Use the answer sheet included with this problem set to record your answers for all three problem sets**, as well as your essay exercises.

Part 1 is designed to give you pacing practice, so be sure to adhere to the time limit indicated at the top of the problem set.

**STEP 2**
Once you complete Part 1, log back into your Customized Homework Path and enter your answers for scoring. Once you have done so, Part 2 will become available.

Part 2 is designed to give you targeted practice with the concepts and skills specific to that chapter. This problem set should not be timed.

**STEP 3**
Complete Part 2 and log into your Customized Homework Path and enter your answers for scoring. Once you have done so, Part 3 will become available.

Part 3 is designed to give you pacing practice, so be sure to adhere to the time limit indicated at the top of the problem set.

**STEP 4**
Complete Part 3 and log into your Customized Homework Path and enter your answers for scoring.

**STEP 5**
Complete the essay exercises your tutor assigns and have your answer sheet available to review with your tutor at your next lesson.

*Need help logging into your Customized Homework Path? Instructions can be found at the front of your SAT Manual.*
**ANSWER SHEET**

Use this answer sheet to record your answers for Parts 1, 2, and 3 of your homework assignment.

### PART 1

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ASSIGNMENT

Your tutor will assign one, two, or all three of the essay tasks listed below.

☐ Read and annotate the passage (10 minutes)

☐ Brainstorm your thesis and outline your essay (8 minutes)

☐ Write and edit your essay (32 minutes)

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As you read the passage below, consider how Vivian Nixon and Glenn E. Martin use

- evidence, such as facts or examples, to support claims.
- reasoning to develop ideas and to connect claims and evidence.
- stylistic or persuasive elements, such as word choice or appeals to emotion, to add power to the ideas expressed.

Adapted from Vivian Nixon and Glenn E. Martin, “The Promise of Pell” from Homeroom, the Official Blog of the U.S. Department of Education. Nixon is executive director of College and Community Fellowship, an organization committed to removing individual and structural barriers to higher education for women with criminal record histories and their families. Martin is the founder and president of JustLeadershipUSA, a national advocacy organization dedicated to cutting the U.S. correctional population in half by 2030. Originally published August 11, 2015.

1 A gallery of criminal justice experts, educators, and formerly incarcerated individuals gathered at a 2008 conference at SUNY Old Westbury to examine how access to higher education in prisons and for formerly incarcerated individuals could positively transform individual lives and communities. The conversations held at this conference revolved around the need to dedicate advocacy efforts towards eliminating barriers to higher education for currently and formerly incarcerated people. We were a lone wolf of sorts; a singular outlier in the field—at the time, no criminal justice reform organization exclusively addressed this issue. This conference was the first of its kind dedicated to expanding higher education access for the incarcerated.

2 We saw then, as we do now, that access to higher education must be the central element of any substantive effort to reform the criminal justice system and to improve the lives of the individuals this system is intended to rehabilitate.

3 Our personal interest in the subject stems from the fact that each of us had a very different experience while incarcerated. Glenn Martin was incarcerated with the opportunity to earn a degree from the Niagara Consortium. He eagerly pursued this opportunity, realizing that his in-prison education would grant him opportunities for a civically engaged life post-release. On the other hand,
the facility where Vivian Nixon served her sentence lacked any postsecondary programs, thus squandering the potential of the women incarcerated within and creating additional barriers to successful reentry.

Education became a tool that Glenn could use to chip away at the barriers before him—his opportunities for employment and further postsecondary education were improved substantially. More than anything, though, having access to these classes empowered Glenn and allowed him to think critically about what had led him to prison and what he could do to ensure he never returned.

Both of us realized that to deprive anyone of access to higher education, when the circumstances themselves merited the highest kind of educational intervention, was to limit them from tapping into their full potential.

To adequately address these issues, we formed the Education from the Inside Out Coalition—currently led by the College and Community Fellowship, JustLeadershipUSA, and the Center for Community Alternatives. It is a national, non-partisan collaborative of organizations, individuals affected by the criminal justice system, advocates, and educators dedicated to increasing access to higher education.

Our initial efforts centered on restoring Federal Pell Grants to incarcerated individuals. In 1994, as part of the Violent Crimes Control and Law Enforcement Act passed by Congress and signed into law by President Bill Clinton, students incarcerated in Federal and State prisons, of which there were approximately 23,000 at the time, lost the ability to access Pell Grants to fund higher education. A product of the era’s “tough on crime” mentality, this legislation reflected the misguided belief that only heavy-handed tactics could solve the period’s soaring crime rates. Research in the intervening decades has helped shatter the myth that education for the incarcerated doesn’t reduce crime. This research clearly demonstrates that access to higher education is actually a boon for public safety; it drives down recidivism rates, improves the lives of incarcerated students and returning citizens, and improves the lives of their families and communities.

On July 31st, Secretary Duncan and Attorney General Lynch, along with several Obama Administration officials and members of Congress, announced an initiative that will waive the ban on Pell Grant eligibility for individuals in select Federal and State penal institutions. We hope that this announcement will be a step towards ultimately reversing the ban.

When Senator Claiborne Pell created Pell Grants, he wanted to ensure that everyone would have access to higher education, especially those on the lower rungs of the socioeconomic ladder. He was concerned with creating access for those who most needed education. Senator Pell saw education as a human right that could help lift up individuals, not a privilege that could be denied as a punitive measure.

... Because of our own disparate experiences in accessing higher education in prison, we know firsthand the transformative power education can have on the life of someone who is involved in the justice system. It can take these individuals, the ones that society often overlooks and forgets, and forge them into future leaders and change makers.

Write an essay in which you explain how the Vivian Nixon and Glenn E. Martin build an argument to persuade their audience that access to higher education for incarcerated and formerly incarcerated individuals is a key component in reforming the criminal justice system. In your essay, analyze how Nixon and Glenn use one or more of the features listed above (or features of your own choice) to strengthen the logic and persuasiveness of their argument. Be sure that your analysis focuses on the most relevant aspects of the passage. Your essay should not explain whether you agree with Nixon and Martin’s claims, but rather explain how Nixon and Martin build an argument to persuade their audience.
PLANNING PAGE  Use the space below to plan your essay. Use the lined pages to write your essay.
DIRECTIONS FOR MULTIPLE-CHOICE QUESTIONS: For this section, you may use the available space for your scratch work. Solve each problem, and fill in the corresponding oval for your answer on the answer sheet.

DIRECTIONS FOR GRID-IN QUESTIONS: These questions require you to solve the problems on your own and enter your answers into the corresponding grids by marking the appropriate ovals.

- Do not mark more than one oval per column.
- Columns not needed should be left blank.
- You will receive credit only if you fill the ovals in correctly.
- Some questions may have more than one correct answer. Only grid in one of the correct answers.
- No answer will have a negative value.
- Mixed numbers such as 1 1/2 must be entered as 1.5 or 3/2.
- Decimal answers with more digits than the grid can accommodate may be either rounded or truncated, but you must fill the entire grid. For example, 0.666... can be entered as 2/3, .666, or .667. If .66 or .67 is entered instead, it will be scored as incorrect.

1. You may use a calculator for ALL of the problems in this homework assignment.
2. Only real numbers are used.
3. Figures that accompany problems in this section are provided to help you solve the problem. You can assume that figures are accurately drawn to scale EXCEPT when it is noted otherwise. All figures lie in a plane unless otherwise noted.
4. The domain of any function $f$ is defined as the set of all real number $x$ values for which $f(x)$ is a real number, unless otherwise noted.

The number of degrees of arc in a circle is 360.
The number of radians of arc in a circle is $2\pi$.
The sum of the measures in degrees of the angles of a triangle is 180.
1. A radioactive material decays at the rate of 5% per year. If there were originally 50 grams of the material, which equation can be used to find the amount, $A$, in grams, of the material left after $t$ years?

A) $A = 50(0.95)^t$
B) $A = 50(1.05)^t$
C) $A = 95(0.5)^t$
D) $A = 105(0.5)^t$

2. If $\frac{n}{m} = \frac{1}{2}$, what is the value of $\frac{m}{n} + 1$?

A) $\frac{1}{4}$
B) 1
C) $\frac{3}{2}$
D) 3

3. If $a \geq 0$ and $a^2 - 2.25 = 0$, what is the value of $a$?

A) 0
B) 1.5
C) 2.25
D) 3

4. In the above function, $k$ is a constant. For what value of $x$ is the function undefined?

A) -9
B) -1
C) 1
D) 9

5. The polynomial $f$ has $x$, $x - 2$, and $x + 1$ as factors. What is the value of $f(2)$?

A) -1
B) 0
C) 1
D) 2
6. Suppose \( f(x) = 2x^2 + 4x - 5 \). What is the value of \( f(-3) \)?

A) -53  
B) -35  
C) 1  
D) 19

7. The formula \( z = \frac{x - \mu}{\sigma} \) is often used in statistics. In this formula, \( x \) is an original data value, \( \mu \) is the mean, \( \sigma \) is the standard deviation, and \( z \) is called the \( z \)-score. Which of the following formulas correctly expresses \( \sigma \) in terms of \( x \), \( z \), and \( \mu \)?

A) \( \sigma = \frac{z}{x + \mu} \)  
B) \( \sigma = \frac{z}{x + \mu} \)  
C) \( \sigma = \frac{x + \mu}{z} \)  
D) \( \sigma = \frac{x - \mu}{z} \)

8. Tyrone opens a bank account that pays 1.75% interest compounded annually. He deposits $200 in his account. If he does not make any additional deposits to this account, which expression can be used to find the amount of money in Tyrone’s account after \( x \) years?

A) \( 200(1.75)^x \)  
B) \( 200(0.175)^x \)  
C) \( 200(1.175)^x \)  
D) \( 200(1.0175)^x \)

9. Which of the following expressions is equivalent to \( 4x^2 - xy + \frac{1}{16}y^2 \)?

A) \( \left(2x - \frac{1}{4}y^2\right)^2 \)  
B) \( \left(2x - \frac{1}{4}y\right)^2 \)  
C) \( \left(4x - \frac{1}{16}y\right)^2 \)  
D) \( \left(4x - \frac{1}{16}y\right)^2 \)
10. If the expression above is rewritten in the form \( ax^2 + bx + c \), where \( a \), \( b \), and \( c \) are constants, what is the value of \( b \)?

A) -10  
B) -1  
C) 1  
D) 10

11. What is the value of \( x \) in terms of \( n \)?

A) \( n \)  
B) \( n^2 \)  
C) \( n^2 - 6n \)  
D) \( n^2 + 6n \)

12. If \( (x, y) \) is one of the solutions to the system of the equations above, what is the value of \( (x + 2)^2 \)?

A) 1  
B) 2  
C) 4  
D) 9

13. If \( \frac{a-b}{b} = \frac{3}{5} \), which of the following must also be true?

A) \( \frac{a}{b} = \frac{2}{5} \)  
B) \( \frac{a}{b} = \frac{8}{5} \)  
C) \( \frac{b}{a} = \frac{2}{5} \)  
D) \( \frac{b}{a} = \frac{8}{5} \)
14. Kevin throws a basketball straight up in the air. The height of the basketball in feet is found using the equation \( y = ax^2 + bx + c \). Which of the letters in the equation represents the height at which Kevin releases the ball?

A) \( a \)  
B) \( b \)  
C) \( c \)  
D) \( x \) 

16. Given the equation \( \sqrt[3]{x - m^3} = -3 \), what is the value of \( x \) in terms of \( m \)?

A) \( 27 + m^3 \)  
B) \( -27 + m^3 \)  
C) \( (-3 + m)^3 \)  
D) \( (-3 + m^3)^3 \) 

17. Which of the following expressions is equivalent to \( \frac{3x}{x - 2} - \frac{4x}{2 - x} \)?

A) \( \frac{x}{x - 2} \)  
B) \( \frac{x}{2 - x} \)  
C) \( \frac{7x}{x - 2} \)  
D) \( \frac{7x}{2 - x} \) 

18. In the \( xy \)-plane the graph of the function \( f \) has \( x \)-intercepts at -6, 2, and 6. Which of the following could define \( f \)?

A) \( f(x) = (x - 6)(x + 2)(x + 6) \)  
B) \( f(x) = (x - 6)^2(x + 2) \)  
C) \( f(x) = (x - 6)(x - 2)(x + 6) \)  
D) \( f(x) = (x - 2)(x + 6)^2 \)
19. A car that cost $15,000 will depreciate in value by 10% each year. Approximately what is the value of car at the end of 10 years?

A) $5,230  
B) $5,811  
C) $9,187  
D) $9,770

20. The path of a javelin thrown by an athlete from a height of 6 feet can be modeled by the expression $-16t^2 + 80t + 6$ where $t$ is the time after the javelin has been released and before it hits the ground. Which expression correctly reveals the time at which the javelin was at the maximum height above the ground?

A) $-16t(t - 5) + 6$  
B) $-16t(t + 5) + 6$  
C) $-16(t - 2.5)^2 + 106$  
D) $-16(t + 2.5)^2 + 12.25$

21. What is the sum of all values of $k$ that satisfy $3k^2 - 15k + 11 = 0$?

A) -15  
B) -5  
C) 5  
D) 15

22. The average velocity of a molecule in a sample of gas is given by $\mu = \frac{3RT}{M}$, where $\mu$ is the average velocity, $R$ is the ideal gas constant, $T$ is the absolute temperature, and $M$ is the mass of a mole of the gas. Which equation correctly models the temperature $T$ of the sample of gas in terms of $\mu$, $R$, and $M$?

A) $\frac{\mu^2 M}{3R} = T$  
B) $\frac{\mu^2}{3MR} = T$  
C) $\sqrt{\frac{\mu M}{3R}} = T$  
D) $\sqrt{\frac{\mu M}{3R}} = T$

23. The time period of a simple pendulum is given by $T = 2\pi \sqrt{\frac{l}{g}}$, where $l$ is the length of the string and $g$ is the constant. If the length of the string increases by 5%, then what will be the effect on the time period?

A) The time period of pendulum increases by 1.02%.  
B) The time period of pendulum decreases by 1.02%.  
C) The time period of pendulum increases by 2.5%.  
D) The time period of pendulum decreases by 2.5%.
24. For a polynomial \( p(x) \), the value of \( p(5) \) is 4. Which of the following must be true about \( p(x) \)?

A) The remainder when \( p(x) \) is divided by \( x - 4 \) is 5
B) The remainder when \( p(x) \) is divided by \( x - 5 \) is 4
C) The remainder when \( p(x) \) is divided by \( x + 4 \) is 5
D) The remainder when \( p(x) \) is divided by \( x + 5 \) is 4

25. The height of an acorn from the ground, in meters, as it falls from a tree can be represented by the equation \( f(x) = h - 9.8x^2 \). The acorn was 7.2 meters off the ground when it fell off the tree, and was 4.75 meters off the ground after falling for 0.5 seconds. What is the value of \( h \)?

26. What is the sum of all the values of \( x \) that satisfy the equation \( 3x^2 - 12x - 63 = 0 \)?
27. If \((x_1, y_1)\) and \((x_2, y_2)\) are the solutions to the system of equations above, what is the sum of \(x_1\) and \(x_2\)?

\[
\begin{align*}
x^2 - 4y &= 2 \\
6x - 8y &= 4
\end{align*}
\]

28. A population of cells grows according to the equation \(P = A(2)^t\). The initial population is \(A\), the time in weeks since the population was first measured is \(t\), and \(h\) is the number of times per week the population doubles. If the population of cells doubles in number every 28 hours, what is the correct value for \(h\)?

\[
\sqrt{2x + a} = x + 1
\]

29. If \(x - y = 2\), what is the value of \(\frac{(3^x)(3^y)}{3^{xy}}\)?

30. What is the smallest value of \(a\) for the equation above to have a real solution?